



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/346,361	07/01/99	OLSON	E 41367-200030

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EXAMINER

MOTTOLA, S

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 12/15/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

346361

Applicant(s)

Olson et al

Examiner

Mottola

Group Art Unit

2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-27 is/are pending in the application.
- Of the above claim(s) 1-3, 7-10, 15-19, 24 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 4-6, 11-14, 20-21, 25-27 is/are rejected.
- ☒ Claim(s) 22, 23 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2817

Newly added claims 8-10, 15-19 and 24 depend ultimately from nonelected claims 1-3, and claim 7 is directed to the nonelected invention, a modulation stage, the mention of the stage being "within a digital amplifier" in the preamble being an intended use only as no amplifier function or structure exists in the body of the claim. Therefore claims 1-3, 7-10, 15-19 and 24 are withdrawn from consideration at this time. It appears the dependency of many of the newly added claims may be incorrect. The Examiner would entertain treating corrected claims to the elected invention, which the Examiner believes would include claims 15-19 and 24. Claims drawn to the nonelected invention should be cancelled in lieu of arguments against the restriction requirement, which the Examiner believes would include claims 1-3 and 7-10. An action on the merits of claims 4-6, 11-14, 20-23 and 25-27 follows.

The disclosure is objected to because of the following informalities: on line 8 of claim 14 'noise' is misspelled.

Appropriate correction is required.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for many elements of this claim. By way of suggestion, it appears this claim should depend from claim 26.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 4-6, 11-13 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by

Adrian et al or Howatt.

Refer for instance to fig. 8A of Adrian et al. clearly showing a digital PWM stage 24 that may be read as the claimed modulation stage followed by a tri-state power switch drive logic stage 28 which may be read as the H-bridge controller claimed. It drives an H-bridge 26 with two separate outputs.

Likewise Howatt in figs. 3 and 7 discloses a PWM stage followed by a 3 or 4 state power switch drive logic stage for controlling the H-bridge 26 with two separate outputs.

Claims 14, 20 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Tripathi et al.

Refer to fig. 4B for instance of Tripathi et al. An adder 408 may be read as the summation circuit claimed. Its output is connected to an integrator 406 which may be read as the claimed noise shaping network the output of which is connected to a clocked comparator stage 410 sampled at a sampling frequency f_s and which may be read as the sampling stage claimed. A feedback loop including a D/A converter 418 is connected between the output of the sampled stage 410 and the adder 408 and power switch 412 also connected to the output of the sampled stage 410 may be read as the output stage claimed. In re claim 25, note integrator 402 as well.

Art Unit:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

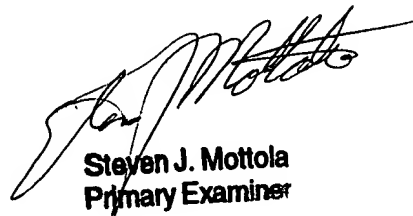
Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tripathi et al. in view of Adrian et al.

The difference added by this claim is the limitation that the output stage includes an H-bridge controller. While Tripathi et al do not disclose the details of their power switch stage, it could include a power switching network (lines 9-11 of col. 9). Adrian et al. disclose the use of an H-bridge power switching stage with appropriate control circuitry. It is also utilized with a noise shaped PWM signal. It would have been obvious to utilize such a network for the power switch of Tripathi et al since a known type of power switch used in a similar context would have been a logical choice.

Art Unit:

Claims 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Mr. Mottola at telephone number (703) 308-4914.



Steven J. Mottola
Primary Examiner